KCA Laboratories
232 North Plaza Drive
Nicholasville, KY 40356

+1-833-KCA-LABS
https://kcalabs.com
KDA Lic.# P_0058

Certificate of Analysis

dark chocolate

Sample ID: SA-241227-54287
Batch: 12/27/2024
Type: Finished Product - Ingestible
Matrix: Edible - Chocolate
Unit Mass (g): 80.3551

Received: 01/02/2025
Completed: 02/20/2025

Client
Rush Hemp Farms
3408 Best Rd
Maryville, TN 37803
USA
Lic. #: EDIY-BQNNJN

Summary

Test	Date Tested	Status
Cannabinoids	01/28/2025	Tested
Heavy Metals	01/08/2025	Tested
Microbials	01/09/2025	Tested
Mycotoxins	01/08/2025	Tested
Pesticides	02/20/2025	Tested
Residual Solvents	01/08/2025	Tested

0.257 %	0.257 %	0.269 %	Not Tested	Not Tested	Yes
Total Δ9-THC	Δ9-THC	Total Cannabinoids	Moisture Content	Foreign Matter	Internal Standard Normalization

Cannabinoids by HPLC-PDA

Analyte	LOD (%)	LOQ (%)	Result (%)	Result (mg/unit)
CBC	0.00095	0.00284	ND	ND
CBCA	0.00181	0.00543	ND	ND
CBCV	0.0006	0.0018	ND	ND
CBD	0.00081	0.00242	<LOQ	<LOQ
CBDA	0.00043	0.0013	ND	ND
CBDV	0.00061	0.00182	ND	ND
CBDVA	0.00021	0.00063	ND	ND
CBG	0.00057	0.00172	ND	ND
CBGA	0.00049	0.00147	ND	ND
CBL	0.00112	0.00335	ND	ND
CBLA	0.00124	0.00371	ND	ND
CBN	0.00056	0.00169	<LOQ	<LOQ
CBNA	0.0006	0.00181	ND	ND
CBT	0.0018	0.0054	ND	ND
Δ8-THC	0.00104	0.00312	0.0125	10.1
Δ9-THC	0.00076	0.00227	0.257	208
Δ9-THCA	0.00084	0.00251	ND	ND
Δ9-THCV	0.00069	0.00206	<LOQ	<LOQ
Δ9-THCVA	0.00062	0.00186	ND	ND
Total Δ9-THC			**0.257**	**208**
Total			**0.269**	**218**

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; RL = Reporting Limit; Δ = Delta; Total Δ9-THC = Δ9-THCA * 0.877 + Δ9-THC; Total CBD = CBDA * 0.877 + CBD;

Generated By: Ryan Bellone
CCO
Date: 02/20/2025

Tested By: Nicholas Howard
Scientist
Date: 01/28/2025

ISO/IEC 17025:2017 Accredited
Accreditation #108651

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Heavy Metals by ICP-MS

Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)
Arsenic	0.002	0.02	<LOQ
Cadmium	0.001	0.02	0.135
Lead	0.002	0.02	0.0200
Mercury	0.012	0.05	ND

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Generated By: Ryan Bellone
CCO
Date: 02/20/2025

Tested By: Chris Farman
Scientist
Date: 01/08/2025

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Pesticides by LC-MS/MS and GC-MS/MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
Abamectin	30	100	ND	Hexythiazox	30	100	ND
Acephate	30	100	ND	Imazalil	30	100	ND
Acequinocyl	30	100	ND	Imidacloprid	30	100	ND
Acetamiprid	30	100	ND	Kresoxim methyl	30	100	ND
Aldicarb	30	100	ND	Malathion	30	100	ND
Azoxystrobin	30	100	ND	Metalaxyl	30	100	ND
Bifenazate	30	100	ND	Methiocarb	30	100	ND
Bifenthrin	30	100	ND	Methomyl	30	100	ND
Boscalid	30	100	ND	Mevinphos	30	100	ND
Captan	700	2000	ND	Myclobutanil	30	100	ND
Carbaryl	30	100	ND	Naled	30	100	ND
Carbofuran	30	100	ND	Oxamyl	30	100	ND
Chloranthraniliprole	30	100	ND	Paclobutrazol	30	100	ND
Chlordane	30	100	ND	Parathion methyl	30	100	ND
Chlorfenapyr	30	100	ND	Pentachloronitrobenzene	30	100	ND
Chlorpyrifos	30	100	ND	Permethrin	30	100	ND
Clofentezine	30	100	ND	Phosmet	30	100	ND
Coumaphos	30	100	ND	Piperonyl Butoxide	30	100	ND
Cyfluthrin	30	100	ND	Prallethrin	30	100	ND
Cypermethrin	30	100	ND	Propiconazole	30	100	ND
Diazinon	30	100	ND	Propoxur	30	100	ND
Dichlorvos	30	100	ND	Pyrethrins	30	100	ND
Dimethoate	30	100	ND	Pyridaben	30	100	ND
Dimethomorph	30	100	ND	Spinetoram	30	100	ND
Ethoprophos	30	100	ND	Spinosad	30	100	ND
Etofenprox	30	100	ND	Spiromesifen	30	100	ND
Etoxazole	30	100	ND	Spirotetramat	30	100	ND
Fenhexamid	30	100	ND	Spiroxamine	30	100	ND
Fenoxycarb	30	100	ND	Tebuconazole	30	100	ND
Fenpyroximate	30	100	ND	Thiacloprid	30	100	ND
Fipronil	30	100	ND	Thiamethoxam	30	100	ND
Flonicamid	30	100	ND	Trifloxystrobin	30	100	ND
Fludioxonil	30	100	ND				

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Generated By: Ryan Bellone
CCO
Date: 02/20/2025

Tested By: Anthony Mattingly
Scientist
Date: 02/20/2025

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Mycotoxins by LC-MS/MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
B1	1	5	ND
B2	1	5	ND
G1	1	5	ND
G2	1	5	ND
Ochratoxin A	1	5	ND

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CCO
Date: 02/20/2025

Tested By: Anthony Mattingly
Scientist
Date: 01/08/2025

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Microbials by PCR and Plating

Analyte	LOD (CFU/g)	Result (CFU/g)	Result (Qualitative)
Total aerobic count	10	ND	
Total coliforms	10	ND	
Generic E. coli	10	ND	
Salmonella spp.	1		Not Detected per 1 gram
Shiga-toxin producing E. coli (STEC)	1		Not Detected per 1 gram

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Generated By: Ryan Bellone
CCO
Date: 02/20/2025

Tested By: Natalia Wright
Laboratory Technician
Date: 01/09/2025

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Residual Solvents by HS-GC-MS

Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)	Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)
Acetone	167	500	ND	Ethylene Oxide	0.5	1	ND
Acetonitrile	14	41	ND	Heptane	167	500	ND
Benzene	0.5	1	ND	n-Hexane	10	29	ND
Butane	167	500	ND	Isobutane	167	500	ND
1-Butanol	167	500	ND	Isopropyl Acetate	167	500	ND
2-Butanol	167	500	ND	Isopropyl Alcohol	167	500	ND
2-Butanone	167	500	ND	Isopropylbenzene	167	500	ND
Chloroform	2	6	ND	Methanol	100	300	ND
Cyclohexane	129	388	ND	2-Methylbutane	10	29	ND
1,2-Dichloroethane	0.5	1	ND	Methylene Chloride	20	60	ND
1,2-Dimethoxyethane	4	10	ND	2-Methylpentane	10	29	ND
Dimethyl Sulfoxide	167	500	ND	3-Methylpentane	10	29	ND
N,N-Dimethylacetamide	37	109	ND	n-Pentane	167	500	ND
2,2-Dimethylbutane	10	29	ND	1-Pentanol	167	500	ND
2,3-Dimethylbutane	10	29	ND	n-Propane	167	500	ND
N,N-Dimethylformamide	30	88	ND	1-Propanol	167	500	ND
2,2-Dimethylpropane	167	500	ND	Pyridine	7	20	ND
1,4-Dioxane	13	38	ND	Tetrahydrofuran	24	72	ND
Ethanol	167	500	ND	Toluene	30	89	ND
2-Ethoxyethanol	6	16	ND	Trichloroethylene	3	8	ND
Ethyl Acetate	167	500	ND	Xylenes (o-, m-, and p-)	73	217	ND
Ethyl Ether	167	500	ND				
Ethylbenzene	3	7	ND				

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Tested By: Kelsey Rogers
Scientist
Date: 01/08/2025

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